

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A pharmaceuticals characterized by general formula (I)

Z-L-V (I)

wherein

V denotes a peptide with a binding sequence -X¹-X²-Val-Tyr-Ile-His-Pro-X⁸-X⁹-X¹⁰,
(SEQ ID NO. 1)

L denotes bond or a linker,

Z denotes a chelating agent suitable for ~~group that optionally can~~ carrying a radionuclide
an imaging moiety M,

X¹ denotes-NY₁-(CH₂)_m-CO- where m is an integer from 1 to 10 and Y₁ is H or an
alkyl- or aryl-containing substituent,

X² denotes Arg, N-alkylated Arg, or ~~a~~Arg mimetic Phe[4-guanidino] or Gly-4-
piperidyl[N-amidino],

X⁸ denotes Gly, Phe, Phg, Hph, Bip, Ala, Tyr, His, Trp or Nal, ~~SEQ ID NO. 1~~

X⁹ and X¹⁰ denote, independent of each other, Pro, Arg, His, Ala, Phe, Glu, Leu, Val, Ile,
Met, Trp, Asp or Lys ~~SEQ ID NO. 1~~ and where X⁸, X⁹ and X¹⁰ together constitute an
ACE cleavage site;

and wherein the residues Val and Ile at position 3 and 5 respectively may optionally be
replaced with the amino acids cysteine or homocysteine capable of forming a bridging
unit wherein the bridge contains ~~ing~~ a -CH₂-CH₂-, -S-CH₂-, -S-CH₂-S-, lactam or --S-S-
unit,

Amtd. Dated December 21, 2009

Reply to Office Action of September 28, 2009

Z forms a bond with the amino acid X¹ optionally through the linker L, and

M where present denotes an imageable moiety capable of detection either directly or indirectly in a diagnostic imaging procedure is selected from ⁶⁷Ga, ¹¹¹In, ^{81m}Kr, ⁹⁹Mo, ^{98m}Tc, ²⁰¹Tl, ⁶⁸Ga and ⁸²Rb.

2. (Currently Amended) A pharmaceutical according to claim 1 wherein the amino acid of X¹, X², X⁸, X⁹, X¹⁰ are independently selected from

X¹ denoting Gly

X² denoting Arg or N-Methyl-Arg

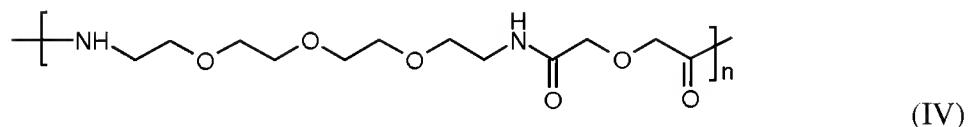
X⁸ denoting Phe

X⁹ denoting Pro, Arg, His, Ala, Phe, Glu, Leu, Val, Ile, Met, Trp, Asp or Lys SEQ ID NO. 4 and

X¹⁰ denoting Pro, Arg, His, Ala, Phe, Glu, Leu, Val, Ile, Met, Trp, Asp or Lys SEQ ID NO. 4.

3. (Currently Amended) A pharmaceutical according to claim 1 further comprising one or more biomodifier groups are attached to any positions of the V and L groups of formula (I)

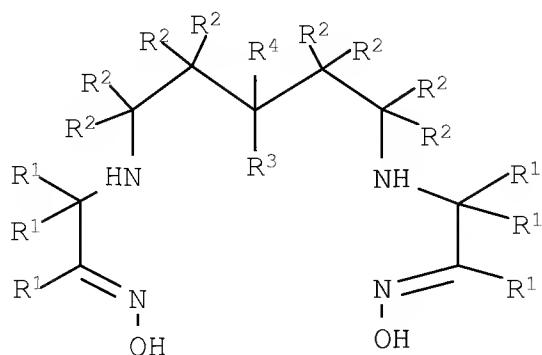
of formula (IV)



wherein n equals an integer from 1 to 10 and where the C-terminal unit forms an amide bond attached to any positions of the V and L groups of formula (I).

4. (Cancelled) A pharmaceutical according to claim 1 wherein Z denotes a chelating agent.

5. (Original) A pharmaceutical according to claim 4 wherein Z denotes the chelating agent of formula (VII)



(VII)

wherein:

each R¹, R², R³ and R⁴ is independently H or C₁₋₁₀ alkyl, C₃₋₁₀ alkylaryl, C₂₋₁₀ alkoxyalkyl, C₁₋₁₀ hydroxyalkyl, C₁₋₁₀ alkylamine, C₁₋₁₀ fluoroalkyl, or 2 or more R groups, together with the atoms to which they are attached form a carbocyclic, heterocyclic, saturated or unsaturated ring.

6. (Cancelled) A pharmaceutical according to claim 5 wherein M represents an imageable moiety for the use in diagnosis particularly in *in vivo* diagnosis comprising a moiety which emit or cause to emit detectable radiation, a moiety which affect local electromagnetic fields, moieties which absorb or scatter radiation energy, heavy metals and compounds thereof and moieties which generate a detectable substance.

7. (Currently Amended) A pharmaceutical according to claim 56 wherein M represents a gamma emitting moiety for Radio or SPECT imaging comprising selected from ⁶⁷Ga, ¹¹¹In, ¹²³I, ¹²⁵I, ¹³¹I, ^{81m}Kr, ⁹⁹Mo, ^{99m}Tc and ²⁰¹Tl and ¹³³Xe.

8. (Currently Amended) A pharmaceutical according to claim 56 wherein M represents a radio emitter with positron emitting properties for PET imaging comprising ¹¹C, ¹⁸F, ⁶⁸Ga, ¹³N, ¹⁵O and ⁸²Rb.

9. (Currently Amended) A pharmaceuticals according to claim 24 characterized by
general formula (I)

Z L V — (I)

wherein

~~V denotes a peptide with a binding sequence X¹-X²-Val-Tyr-Ile-His-Pro-X⁸-X⁹-X¹⁰;~~
~~SEQ ID NO. 1 wherein the amino acid of X¹, X², X⁸, X⁹, X¹⁰ are independently~~
~~selected from~~

~~X¹ denoting Gly~~

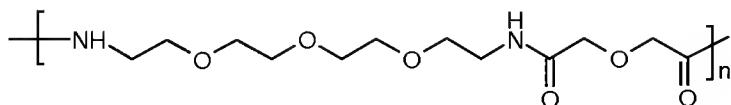
~~X² denoting Arg or N-Methyl Arg~~

~~X⁸ denoting Phe~~

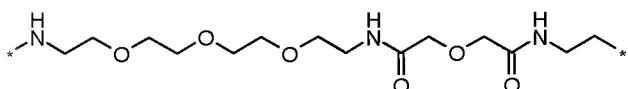
~~X⁹ denoting Pro, Arg, His, Ala, Phe, Glu, Leu, Val, Ile, Met, Trp, Asp or Lys SEQ ID NO. 1 and~~

~~X¹⁰ denoting Pro, Arg, His, Ala, Phe, Glu, Leu, Val, Ile, Met, Trp, Asp or Lys SEQ ID NO. 1.~~

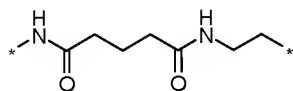
wherein L denotes a bond or a linker selected from compounds of formula NH-(CH₂)_m- optionally combined with -CO-(CH₂)_m-CO- where m denotes a positive integer from 1 to 10, one or more units of compounds of formula (IV) wherein n is an integer from 1 to 10, compounds of formula (X) or (VI)



Formula (IV)

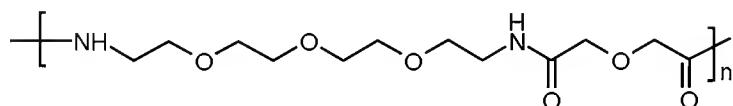


Formula (X)



Formula (VI)

~~Z denotes a chelating agent of formula (VII) that optionally can carry an imaging moiety M, and one or more biomodifier groups selected from monodisperse PEG building block comprising 1 to 10 units of said building block or the compound of formula IV,~~



Formula (IV)

~~wherein n equals an integer from 1 to 10 are attached to any positions of the V and L groups of formula (I).~~

10. (Original) Pharmaceutical formulation comprising a pharmaceutical of formula (I) of claim 1 together with one or more pharmaceutical acceptable additives and/or excipients.

11. (Cancelled) A kit for the preparation of a radiopharmaceutical composition of formula (I) comprising a peptide-chelate conjugate and a reducing agent.